THE JOURNAL OF
ANTIBIOTICS

An International Journal Devoted to Research on Bioactive Microbial Products

Volume 58

CONTENTS

Review Article

Bioactive Microbial Metabolites A Personal View
János Bérdy. . . . . (1): 1~26

Studies on Biosynthetic Genes and Enzymes of Isoprenoids Produced by Actinomycetes
Tohru Dairi . . . . . (4): 227~243

NEW AGENTS SECTION

BIOLOGICALLY ACTIVE MICROBIAL PRODUCTS

Ushikulides A and B, Immunosuppressants Produced by a Strain of *Streptomyces* sp.
Kosaku Takahashi, Teruhiko Yoshihara, Kazuhiko Kurosawa . . . . . (6): 420~424

Isolation and Structures of Novel Fungal Metabolites as Chemokine Receptor (CCR2) Antagonists
Kithsiri B. Herath, Hiranthi Jayasuriya, John G. Ondeyka, Jon D. Polishook, Gerald F. Bills, Anne W. Dombrowski, Angeles Cabello, Pasquale P. Vicario, Hans Zweerink, Ziqiang Guan, Sheo B. Singh . . . . . (11): 686~694

Fungal Metabolites, Sorbicillinoid Polyketides and Their Effects on the Activation of Peroxisome Proliferator-activated Receptor γ
Dongho Lee, Jeong Hyung Lee, Xing Fu Cai, Jin Cheol Shin, Kyeong Lee, Young-Soo Hoong, Jung Joon Lee . . . . . (10): 615~620

Nocardimicins G, H and I, Siderophores with Muscarinic M3 Receptor Binding Inhibitory Activity from *Nocardia nova* JCM 6044
Yoshitaka Ikeda, Tamotsu Furumai, Yasuhiro Igarashi . . . . . (9): 566~572

Novel Analgesic Triglycerides from Cultures of *Agaricus macrosporus* and Other Basidiomycetes as Selective Inhibitors of Neurolysin
Marc Stadler, Veronika Hellwig, Anke Mayer-Bartschmid, Dirk Denzer, Burkhard Wiese, Nils Burkhardt . . . . . (12): 775~786

Studies on Terpenoids Produced by Actinomycetes
Isolation and Structural Elucidation of Antioxidative Agents, Naphterpins B and C
Hiroshi Takagi, Keiichiro Motohashi, Toru Miyamoto, Kazuo Shin-ya, Kazuo Furihata, Haruo Seto ..... (4): 275~278

Spylidone, a Novel Inhibitor of Lipid Droplet Accumulation in Mouse Macrophages Produced by *Phoma* sp. FKI-1840
Nobuhiro Koyama, Tomoko Nagahiro, Yuichi Yamaguchi, Taichi Ohshiro, Rokuro Masuma, Hiroshi Tomoda, Satoshi Ōmura ..... (5): 338~345

Steroidal and Triterpenoidal Fungal Metabolites as Ligands of Liver X Receptors
John G. Ondeyka, Hiranthi Jayasuriya, Kithsiri B. Herath, Ziqiang Guan, Marvin Schulman, Javier Collado, Anne W. Dombrowski, Soojin S. Kwon, Christine McCallum, Neelam Sharma, Karen MacNaul, Nancy Hayes, John G. Menke, Sheo B. Singh ..... (9): 559~565

FR177391, A New Anti-hyperlipidemic Agent from *Serratia*
I. Taxonomy, Fermentation, Isolation, Physico-chemical Properties, Structure Elucidation and Biological Activities
Bunji Sato, Hidenori Nakajima, Takashi Fujita, Shigehiro Takase, Seiji Yoshimura, Takayoshi Kinoshita, Hiroshi Terano ..... (10): 634~639

The Novel Gluconeogenesis Inhibitor FR225654 that Originates from *Phoma* sp. No. 00144
I. Taxonomy, Fermentation, Isolation and Physico-chemical Properties
Yoshihiro Ohtsu, Hiromi Sasamura, Miho Tanaka, Yasuhisa Tsurumi, Seiji Yoshimura, Shigehiro Takase, Toshihiro Shibata, Motohiro Hino, Hidenori Nakajima ..... (7): 447~451

FR258900, a Novel Glycogen Phosphorylase Inhibitor Isolated from Fungus No. 138354
I. Taxonomy, Fermentation, Isolation and Biological Activities
Shigetada Furukawa, Yasuhisa Tsurumi, Kana Murakami, Tomoko Nakanishi, Keisuke Ohsumi, Michizane Hashimoto, Motoaki Nishikawa, Shigehiro Takase, osamu Nakayama, Motohiro Hino ..... (8): 497~502

New Aldose Reductase Inhibitors N99-596 A and B from *Streptomyces*
Yuesheng Dong, Junshan Yang, Xiao Ren, Hua Zhang, Jiangong He ..... (11): 737~739

Absolute Stereostructures of Cell-adhesion Inhibitors, Peribysins A, E, F and G, Produced by a Sea Hare-derived *Periconia* sp.
Takeshi Yamada, Mitsunobu Doi, Atsuko Miura, Waka Harada, Mika Hiramura, Katsuhiko Minoura, Reiko Tanaka, Atsushi Numata ..... (3): 185~191

Xylactam, a New Nitrogen-containing Compound from the Fruiting Bodies of Ascomycete *Xylaria euglossa*
Xing-Na Wang, Ren-Xiang Tan, Ji-Kai Liu ..... (4) 268~270

Aurovertin E, a New Polyene Pyrone from the Basidiomycete *Albatrellus confluens*
Fei Wang, Du-Qiang Luo, Ji-Kai Liu ..... (6): 412~415

Circumdatin H, a New Inhibitor of Mitochondrial NADH Oxidase, from *Aspergillus ochraceus*
M. Pilar López-Gresa, M. Carmen González, Jaime Primo, Pilar Moya, Vanessa Romero, Ernesto Estornell ..... (6): 416~419

New Cyclopentenone Derivatives from an Endophytic *Streptomyces* sp. Isolated from the Mangrove Plant *Aegiceras comiculatum*
Liya Li, Wenhan Lin, Hongzheng Fu, Isabel Sattler, Xueshi Huang, Susanne Grabley ..... (9): 594~598

ANTI-CANCER/CYTOTOXIC SUBSTANCES

Prunustatin A, a Novel GRP78 Molecular Chaperone Down-regulator Isolated from *Streptomyces violaceoniger*
Yukiko Umeda, Shuhei Chijiwa, Kazuo Furihata, Keiko Furihata, Shohei Sakuda, Hiromichi Nagasawa, Hidenori Watanabe, Kazuo Shin-ya ..... (3): 206~209

Deoxyverrucosidin, a Novel GRP78/BiP Down-regulator, Produced by *Penicillium* sp.
Soo-Jin Choo, Hae-Ryong Park, In-Ja Ryoo, Jong-Pyung Kim, Bong-Sik Yun, Chang-Jin Kim, Kazuo Shin-ya, Ick-Dong Yoo ..... (3): 210~213

New Naphthoquinones, f13102A and B, from a Fungus Strain F-13102
Yuya Yoshimoto, Manabu Kawada, Hiroyuki Kumagai, Tetsuya Someno, Hiroyuki Inoue, Naoto Kawamura, Kunio Isshiki, Daishiro Ikeda ..... (9): 590~593

YM-216391, a Novel Cytotoxic Cyclic Peptide from *Streptomyces nobilis*
I. Fermentation, Isolation and Biological Activities
Kin-ya Sohda, Koji Nagai, Takao Yamori, Ken-ichi Suzuki, Akihiro Tanaka ..... (1): 27~31

Retymicin, Galtamycin B, Saquayamycin Z and Ribofuranosyllumichrome, Novel Secondary Metabolites from *Micromonospora* sp. Tü 6368
I. Taxonomy, Fermentation, Isolation and Biological Activities
Noémi Antal, Hans-Peter Fiedler, Erko Stackebrandt, Winfried Beil, Karsten Ströch, Axel Zeeck ..... (2): 95~102

Bioactive Cyclic Peptides from the Psychrotolerant Fungus *Penicillium algidum*
Petur W. Dalsgaard, Thomas O. Larsen, Carsten Christophersen ..... (2): 141~144

Mechercharmycins A and B, Cytotoxic Substances from Marine-derived *Thermoactinomyces* sp. YM3-251
Kaneo Kanoh, Yoshihide Matsuo, Kyoko Adachi, Hiroshi Imagawa, Mugio Nishizawa, Yoshikazu Shizuri ... (4): 289~292

Anicemycin, a New Inhibitor of Anchorage-independent Growth of Tumor Cells from *Streptomyces* sp. TP-A0648
Yasuhiro Igarashi, Koushirou Ootsu, Hiroyasu Onaka, Tsuyoshi Fujita, Yoshimasa Uehara, Tamotsu Furumai ..... (5): 322~326

New 24-Membered Macrolides SPA-6952A and B Produced by *Streptomyces* sp.
Nobuo Hosotani, Kazuo Kumagai, Hiroyuki Nakagawa, Takuro Shimatani, Ikutaro Saji ..... (6): 409~411

Two New Benzoquinone Derivatives and Two New Bisorbicillinoids were Isolated from a Marine-derived Fungus *Penicillium terrestre*
Weizhong Liu, Qianqun Gu, Weiming Zhu, Chengbin Cui, Guotao Fan ..... (7): 441~446

1-Hydroxy-1-norresistomycin, a New Cytotoxic Compound from a Marine Actinomycete, *Streptomyces chibaensis* AUBN$_1$/7
Adinarayana Gorajana, Bapiraju V. V. S. N. Kurada, Sujatha Peela, Premkumar Jangam, Saisha Vinjamur Ellaiah Poluri, Axel Zeeck ..... (8): 526~529

Dihydrotrichodimerol and Tetrahydrotrichodimerol, Two New Bisorbicillinoids, from a Marine-derived *Penicillium terrestre*
Weizhong Liu, Qianqun Gu, Weiming Zhu, Chengbin Cui, Guotao Fan ..... (10): 621~624

A New Cytotoxic Lanostane Triterpenoid from the Basidiomycete *Hebeloma versipelle*
Hong-Jun Shao, Chen Qing, Fei Wang, Yan-Li Zhang, Du-Qiang Luo, Ji-Kai Liu ..... (12): 828~831

ANTIVIRAL & ANTIFUNGAL SUBSTANCES

A Novel Aspochalasin with HIV-1 Integrase Inhibitory Activity from *Aspergillus flavipes*
Simone Rochfort, Joanne Ford, Simon Ovenden, Soo San Wan, Samantha George, Howard Wildman, R. Murray Tait, Barbara Meurer-Grimes, Susan Cox, Jonathan Coates, David Rhodes ..... (4): 279~283

Favolon B, a New Triterpenoid Isolated from the Chilean *Mycena* sp. Strain 96180
Pedro Aqueveque, Timm Anke, Heidrun Anke, Olov Sterner, José Becerra, Mario Silva ..... (1): 61~64

Sch 486058: A Novel Cyclic peptide of Actinomycete Origin
M. S. Puar, T. M. Chan, D. Delgarno, E. Barrabee, M. Hallade, P. Das, P. Bartner, Y-H. Liu, Y-H. Ing, B. Pramanik, M. Patel ..... (2): 151~154

Aurafuron A and B, New Bioactive Polyketides from *Stigmatella aurantiaca* and *Archangium gephyra* (Myxobacteria)
Fermentation, Isolation, Physico-chemical Properties, Structure and Biological Activity
Brigitte Kunze, Hans Reichenbach, Rolf Müller, Gerhard Höfle ..... (4): 244~251

Phenatic Acids A and B, New Potentiators of Antifungal Miconazole Activity Produced by *Streptomyces* sp. K03-0132
Takashi Fukuda, Atsuko Matsumoto, Yoko Takahashi, Hiroshi Tomoda, Satoshi Ōmura ..... (4): 252~259

Citridones, New Potentiators of Antifungal Miconazole Activity, Produced by *Penicillium* sp. FKI-1938
I. Taxonomy, Fermentation, Isolation and Biological Properties
Takashi Fukuda, Yuichi Yamaguchi, Rokuro Masuma, Hiroshi Tomoda, Satoshi Ōmura..... (5): 309~314

Heptemerones A~G, Seven Novel Diterpenoids from *Coprinus heptemerus*: Producing Organism, Fermentation, Isolation and Biological Activities
Melanie Kettering, Carola Valdivia, Olov Sterner, Heidrun Anke, Eckhard Thines ..... (6): 390~396

Rufuslactone, a New Antifungal Sesquiterpene from the Fruiting Bodies of the Basidiomycete *Lactarius rufus*
Du-Qiang Luo, Fei Wang, Xiao-Ying Bian, Ji-Kai Liu ..... (7): 456~459

Antimycins A_{10}~A_{16}, Seven New Antimycin Antibiotics Produced by *Streptomyces* spp. SPA-10191 and SPA-8893
Nobuo Hosotani, Kazuo Kumagai, Hiroyuki Nakagawa, Takuro Shimatani, Ikutaro Saji ..... (7): 460~467

F2928-1 and -2, New Antifungal Antibiotics from *Cladobotryum* sp.
Yoshinori Kanai, Yoshiyuki Tatsumi, Toshiyuki Tokiwa, Yoko Watanabe, Tsukasa Fujimaki, Daisuke Ishiyama, Toru Okuda ..... (8): 507~513

A New Fungicide Produced by a *Streptomyces* sp. GAAS7310
Guangying Chen, Birun Lin, Yongcheng Lin, Fengchun Xie, Wen Lu, Wang-Fun Fong ..... (8): 519~522

ANTIBACTERIAL SUBSTANCES

New Antibiotic Sch 725424 and Its Dehydration Product Sch 725428 from *Kitasatospora* sp.
Shu-Wei Yang, Tze-Ming Chan, Joseph Terracciano, Reena Patel, David Loebenberg, Guodong Chen, Mahesh Patel, Vincent Gullo, Birendra Pramanik, Min Chu ..... (3): 192~195

Identification and Antibacterial Activity of a New Oleandomycin Derivative from *Streptomyces antibioticus*
Beom Seok Kim, Hyuncheol Oh, Sun Young Kim, Jeong Ah Park, Yeo Joon Yoon, Sang Kil Lee, Bo Yeon Kim, Jong Seog Ahn ..... (3): 196~201

Fumaquinone, a New Prenylated Naphthoquinone from *Streptomyces fumanus*
Romila D. Charan, Gerhard Schlingmann, Valerie S. Bernan, Xidong Feng, Guy T. Carter ..... (4): 271~274

Frigocyclinone, a Novel Angucyclinone Antibiotic Produced by a *Streptomyces griseus* Strain from Antarctica
Christina Bruntner, Tatiana Binder, Wasu Pathom-aree, Michael Goodfellow, Alan T. Bull, Olivier Potterat, Carsten Puder, Stefan Hörer, Angela Schmid, Walter Bolek, Klaus Wagner, Gerhard Mihm, Hans-Peter Fiedler ..... (5): 346~349

1-Hydroxy-1-norresistomycin and Resistoflavin Methyl Ether: New Antibiotics from Marine-derived Streptomycetes
Ines Kock, Rajendra P. Maskey, M. A. Farooq Biabani, Elisabeth Helmke, Hartmut Laatsch ..... (8): 530~534

Stemphones, Novel Potentiators of Imipenem Activity against Methicillin-resistant *Staphylococcus aureus*, Produced by *Aspergillus* sp. FKI-2136
Nobuhiro Koyama, Tomoko Nagahiro, Yuichi Yamaguchi, Rokuro Masuma, Hiroshi Tomoda, Satoshi Ōmura ..... (11): 695~703

Lichenicolins A and B, New Bisnaphthopyrones from an Unidentified Lichenicolous Fungus, Strain *LL*-RB0668
Haiyin He, Ramunas Bigelis, Hui Y. Yang, Li-Ping Chang, Maya P. Singh ..... (11): 731~736

Novel Polyketide Metabolites from *Streptomyces rimosus* Mutant Strain R1059
Myrna A. Deseo, Iain S. Hunter, Peter G. Waterman ..... (12): 822~827

ANTIHELMINTHIC, INSECTICIDAL AND OTHER SUBSTANCES

A New Antibiotic, Antimycin A_9, Produced by *Streptomyces* sp. K01-0031
Kazuro Shiomi, Kenji Hatae, Hiroko Hatano, Atsuko Matsumoto, Yōko Takahashi, Cheng-Lin Jiang, Hiroshi Tomoda, Susumu Kobayashi, Haruo Tanaka, Satoshi Ōmura ..... (1): 74~78

New Sesquicillins, Insecticidal Antibiotics Produced by *Albophoma* sp. FKI-1778
Ryuji Uchida, Rie Imasato, Yuichi Yamaguchi, Rokuro Masuma, Kazuro Shiomi, Hiroshi Tomoda, Satoshi Ōmura ..... (6): 397~404

New Insecticidal Antibiotics, Hydroxyfungerins A and B, Produced by *Metarhizium* sp. FKI-1079
Ryuji Uchida, Rie Imasato, Yuichi Yamaguchi, Rokuro Masuma, Kazuro Shiomi, Hiroshi Tomoda, Satoshi Ōmura ..... (12): 804~809

Clonostachysins A and B, New Anti-dinoflagellate Cyclic Peptides from a Marine-derived Fungus
Kyoko Adachi, Kaneo Kanoh, Puntip Wisespongp, Miyuki Nishijima, Yoshikazu Shizuri ..... (2): 145~150

BIOLOGICAL SECTION

SCREENING, FERMENTATION AND GENETICS

Influence of Leucine and Valine on Ramoplanin Production by *Actinoplanes* sp. ATCC 33076
Mara Brunati, Adriana Bava, Flavia Marinelli, Giancarlo Lancini ..... (7): 473~478

Generation of New Epothilones by Genetic Engineering of a Polyketide Synthase in *Myxococcus xanthus*
Li Tang, Loleta Chung, John R. Carney, Courtney M. Starks, Peter Licari, Leonard Katz ..... (3): 178~184

Extended Sequence and Functional Analysis of the Butirosin Biosynthetic Gene Cluster in *Bacillus circulans* SANK 72073
Fumitaka Kudo, Mario Numakura, Hideyuki Tamegai, Hideki Yamamoto,Tadashi Eguchi, Katsumi Kakinuma ..... (6): 373~379

Involvement of Glutamate Mutase in the Biosynthesis of the Unique Starter Unit of the Macrolactam Polyketide Antibiotic Vicenistatin
Yasushi Ogasawara, Katsumi Kakinuma, Tadashi Eguchi ..... (7): 468~472

The Leptomycin Gene Cluster and Its Heterologous Expression in *Streptomyces lividans*
Zhihao Hu, Ralph Reid, Hugo Gramajo ..... (10): 625~633

Orthogonal Protein Interactions in Spore Pigment Producing and Antibiotic Producing Polyketide Synthases
Taek Soon Lee, Chaitan Khosla, Yi Tang ..... (10): 663~666

Biosynthesis of 2-Deoxystreptamine by Three Crucial Enzymes in *Streptomyces fradiae* NBRC 12773
Fumitaka Kudo, Yasuhito Yamamoto, Kenichi Yokoyama, Tadashi Eguchi, Katsumi Kakinuma ..... (12): 766~774

The Biosynthetic Gene Cluster for the β-Lactam Antibiotic Tabtoxin in *Pseudomonas syringae*
Thomas G. Kinscherf, David K. Willis ..... (12): 817~821

BIOTRANSFORMATION AND BIOSYNTHESIS

Biotransformation of Bile Acids by Pathogenic Actinomycetes *Nocardia otitidiscaviarum* and *Amycolatopsis* sp. Strains
Akira Mukai, Katsukiyo Yazawa, Yuzuru Mikami, Ken-ichi Harada, Udo Gräfe ..... (5): 356~360

FR177391, A New Anti-hyperlipidemic Agent from *Serratia*
III. Microbial Conversion of FR177391 and Synthesis of FR177391 Derivatives for Its Target Protein Screening by Chemical Genetic Approaches
Motoo Kobayashi, Kentaro Sato, Seiji Yoshimura, Makiko Yamaoka, Shigehiro Takase, Mitsuru Ohkubo, Takashi Fujii, Hidenori Nakajima. ..... (10): 648~653

Nitrogen Incorporation in the Biosynthetic Pathway of the Nitrogen-containing Polyketide, Pamamycin in *Streptomyces alboniger*
Makoto Hashimoto, Ikuko Kozone, Hiroshi Kawaide, Hiroshi Abe, Masahiro Natsume ..... (11): 722~730

Biosynthesis of Indocarbazostatin B, Incorporation of D-[*U*-^{13}C] Glucose and L-[2-^{13}C] Tryptophan
Yufei Feng, Shinya Mitsuhashi, Takao Kishimoto, Makoto Ubukata ..... (12): 759~765

BIOACTIVITY, ACTION MECHANISM & RESISTANCE

Sulphostin, a Novel Inhibitor of Dipeptidyl Peptidases IV (DPPIV) That Stimulates Hematopoiesis in Mice
Masatoshi Abe, Fuminori Abe, Chihiro Nishimura, Eiji Ichimura, Asuka Ogasawara, Megumi Ichinei, Yasuhiko Muraoka, Tetsushi Saino ..... (2): 111~117

Effect of Cytogenin, a Novel Immunomodulator, on Streptozotocin-induced Diabetes in Mice
Hiroyuki Kumagai, Kuniko Wakazono, Naoki Agata, Kunio Isshiki, Masaaki Ishizuka, Daishiro Ikeda ..... (3): 202~205

Identification and Preliminary SAR Studies of (+)-Geodin as a Glucose Uptake Stimulator for Rat Adipocytes
Seiichi Sato, Noriyuki Okusa, Akiyo Ogawa, Takao Ikenoue, Tetsuya Seki, Takashi Tsuji ..... (9): 583~589

FR177391, A New Anti-hyperlipidemic Agent from *Serratia*
IV. Target Identification and Validation by Chemical Genetic Approaches
Makiko Yamaoka, Kentaro Sato, Motoo Kobayashi, Nobuya Nishio, Mitsuru Ohkubo, Takashi Fujii, Hidenori Nakajima ..... (10): 654~662

Cytotoxic Activities of New Jadomycin Derivatives
Jian-Ting Zheng, Uwe Rix, Lixia Zhao, Cynthia Mattingly, Val Adams, Quan Chen, Jürgen Rohr, Ke-Qian Yang ..... (6): 405~408

Involvement of Nuclear Accumulation of Heat Shock Protein 27 in Leptomycin B-Induced Apoptosis in HeLa Cells
Ayako Tsuchiya, Etsu Tashiro, Minoru Yoshida, Masaya Imoto ..... (12): 810~816

Fungal Phenalenones Inhibit HIV-1 Integrase
Kazuro Shiomi, Ryosuke Matsui, Miki Isozaki, Harumi Chiba, Takahiro Sugai, Yuichi Yamaguchi, Rokuro Masuma, Hiroshi Tomoda, Tomoko Chiba, Hua Yan, Yoshihiro Kitamura, Wataru Sugiura, Satoshi Ōmura, Haruo Tanaka ..... (1): 65~68

Mycophenolic Acid Inhibits Syncytium Formation Accompanied by Reduction of gp120 Expression
Hideaki Ui, Satoshi Asanuma, Harumi Chiba, Atsushi Takahashi, Yuichi Yamaguchi, Rokuro Masuma, Satoshi Ōmura, Haruo Tanaka ..... (8): 514~518

Valinomycin Affects the Morphology of *Candida albicans*
Hiroshi Watanabe, Masayuki Azuma, Koichi Igarashi, Hiroshi Ooshima ..... (12): 753~758

Spectinomycin Resistance in *rpsE* Mutants is Recessive in *Streptomyces roseosporus*
Xiaowei He, Vivian Miao, Richard H. Baltz ..... (4): 284~288

PHARMACOLOGY & TOXICOLOGY

Prevention of Neomycin-induced Nephrotoxic Event in Pig Proximal Tubular Epithelial Cell Line by Apolipoprotein E3
Kozo Takamoto, Manabu Kawada, Daishiro Ikeda ..... (5): 353~355

The Novel Gluconeogenesis Inhibitor that FR225654 Originates from *Phoma* sp. No. 00144
II. Biological Activities
Yoshihiro Ohtsu, Hiromi Sasamura, Toshihiro Shibata, Motohiro Hino, Hidenori Nakajima . . . . . (7): 452~455

FR258900, a Novel Glycogen Phosphorylase Inhibitor Isolated from Fungus No. 138354
II. Anti-hyperglycemic Effects in Diabetic Animal Models
Shigetada Furukawa, Kana Murakami, Motoaki Nishikawa, Osamu Nakayama, Motohiro Hino. . . . . (8): 503~506

FR177391, A New Anti-hyperlipidemic Agent from *Serratia*
II. Pharmacological Activity of FR177391
Masamichi Inami, Ikuo Kawamura, Susumu Tsujimoto, Tohru Yasuno, Elizabeth Lacey, Jiro Hirosumi, Shoji Takakura, Fusako Nishigaki, Yoshinori Naoe, Toshitaka Manda, Seitaro Mutoh. . . . . (10): 640~647

CHEMISTRY SECTION

STRUCTURE DETERMINATION

Biologically Active Microbial Products

The Novel Gluconeogenesis Inhibitor FR225654 that Originates from *Phoma* sp. No. 00144
III. Structure Determination
Yoshihiro Ohtsu, Seiji Yoshimura, Takayoshi Kinoshita, Shigehiro Takase, Hidenori Nakajima . . . . . (7): 479~482

Revised Structures of Epohelmins A and B Isolated as Lanosterol Synthase Inhibitors from a Fungal Strain FKI-0929
Masaaki Shibuya, Barry B. Snider, Yuichi Sakano, Hiroshi Tomoda, Satoshi Satoshi Ōmura, Yutaka Ebizuka . . . . . (9): 599~601

Structure Elucidation of New Ascomycins Produced by Genetic Engineering
John R. Carney, Gary W. Ashley, Robert L. Arslanian, Greg O. Buchannan. . . . . (11): 715~721

Anti-cancer and -fungal Substances

YM-216391, a Novel Cytotoxic Cyclic Peptide from *Streptomyces nobilis*
II. Physico-chemical Properties and Structure Elucidation
Kin-ya Sohda, Masashi Hiramoto, Ken-ichi Suzumura, Yukihiro Takebayashi, Ken-ichi Suzuki, Akihiro Tanaka . . . . . (1): 32~36

Absolute Configuration of Kigamicins A, C and D
Tetsuya Someno, Setsuko Kunimoto, Hikaru Nakamura, Hiroshi Naganawa, Daishiro Ikeda . . . . . (1): 56~60

Retymicin, Galtamycin B, Saquayamycin Z and Ribofuranosyllumichrome, Novel Secondary Metabolites from *Micromonospora* sp. Tü 6368
II. Structure Elucidation
Karsten Ströch, Axel Zeeck, Noémi Antal, Hans-Peter Fiedler . . . . . (2): 103~110

Revision of the Structure Assigned to the Antibiotic BU-4664L from *Micromonopora*
Yasuhiro Igarashi, Satoshi Miyanaga, Hiroyasu Onaka, Michinori Takeshita, Tamotsu Furumai . . . . . (5): 350~352

Citridones, New Potentiators of Antifungal Miconazole Activity, Produced by *Penicillium* sp. FKI-1938
II. Structure Elucidation
Takashi Fukuda, Hiroshi Tomoda, Satoshi Ōmura ..... (5): 315~321

The Relative and Absolute Configuration of PF1140
Yuta Fujita, Hiroki Oguri, Hideaki Oikawa ..... (6): 425~427

Absolute Configuration of TPU-0043, a Pentaene Macrolide from *Streptomyces* sp.
Yasuhiro Igarashi, Yasuko In, Toshimasa Ishida, Tsuyoshi Fujita, Takashi Yamakawa, Hiroyasu Onaka, Tamotsu Furumai ..... (8): 523~525

Structure Elucidation of Sch 725674 from *Aspergillus* sp.
Shu-Wei Yang, Tze-Ming Chan, Joseph Terracciano, David Loebenberg, Mahesh Patel, Min Chu ..... (8): 535~538

Antibacterial Substances

Antibiotics GE23077, Novel Inhibitors of Bacterial RNA Polymerase
II. Structure Elucidation
Alessandra Marazzi, Michael Kurz, Stefania Stefanelli, Luigi Colombo ..... (4): 260~267

Caprazamycins, Novel Lipo-nucleoside Antibiotics, from *Streptomyces* sp.
II. Structure Elucidation of Caprazamycins
Masayuki Igarashi, Yoshiaki Takahashi, Tetsuo Shitara, Hikaru Nakamura, Hiroshi Naganawa, Toshiaki Miyake, Yuzuru Akamatsu ..... (5): 327~337

SYNTHESIS AND STRUCTURE-ACTIVITY RELATIONSHIPS

β-Lactams

The Synthesis of 7-Substituted-3-dinitrostyryl Cephalosporins and Their Ability for Detecting Extended Spectrum β-Lactamases (ESBLs)
Hideaki Hanaki, Hiroaki Yamazaki, Hidenori Harada, Ryoichi Kubo, Takayoshi Kobayashi, Koichiro Atsuda, Keisuke Sunakawa ..... (1): 69~73

SM-216601, a Novel Parenteral 1β-Methylcarbapenem: Structure-activity Relationships of Antibacterial Activity and Neurotoxicity in Mice
Yutaka Ueda, Masanori Itoh, Akira Sasaki, Makoto Sunagawa ..... (2): 118~140

Orally Active Carbapenem Antibiotics I
Antibacterial and Pharmacokinetic Potential of 2-Phenyl and 2-Thienylcarbapenems
Makoto Sunagawa, Yutaka Ueda, Shin-ichiro Okada, Shoji Watanabe, Takahiko Hashizuka, Seiji Hori, Akira Sasaki, Yoshiro Eriguchi, Katsunori Kanazawa ..... (12): 787~803

Macrolides

Macrolides with Promotive Activity of Monocyte to Macrophage Differentiation
Kiminari Yoshida, Toshiaki Sunazuka, Kenichiro Nagai, Akihiro Sugawara, Achim Cho, Tohru Nagamitsu, Yoshihiro Harigaya, Kazuhiko Otoguro, Kiyoko S. Akagawa, Satoshi Ōmura ..... (1): 79~81

15-Amido Erythromycins: Synthesis and *In Vitro* Activity of a New Class of Macrolide Antibiotics
Simon J. Shaw, Darren Abbanat, Gary W. Ashley, Karen Bush, Barbara Foleno, Mark Macielag, Dan Zhang, David C. Myles ..... (3): 167~177

Synthesis, Characterization and *In Vitro* Antimicrobial Activity of Novel Sulfonylureas of 15-Membered Azalides
Mirjana Bukvić Krajačić, Nedjeljko Kujundžić, Miljenko Dumić, Mario Cindrić, Karmen Brajša, Biserka Metelko, Predrag Novak ..... (6): 380~389

Isolation and Identification of a Novel Impurity of Erythromycin A 9-Oxime Desosaminehydrazinium Salt
Casey Chun Zhou, Xiaomei Huang, Kelley L. Ford, L. Steven Hollis ..... (8): 539~544

A Simple Method for Deprotection of the *N*- and *O*-Carbobenzoxy Groups and *N*-Methylation of the Desosamine Sugar Moiety of Ketolides
Application to the Synthesis of Ketolide Analogues with Various 9-Iminoether Moieties and Their Antibacterial Activities
Tsutomu Iwaki, Takashi Nomura, Yukitoshi Narukawa, Koichi Uotani ..... (11): 679~685

Others

Total Synthesis and Biological Activities of (+)-Sulfamisterin (AB5366) and its Analogues
Hideyuki Sato, Takaki Maeba, Ryota Yanase, Akiko Yamaji-Hasegawa, Toshihide Kobayashi, Noritaka Chida ..... (1): 37~49

A γ-Lactone Form Nafuredin, Nafuredin-γ, also Inhibits Helminth Complex I
Kazuro Shiomi, Hideaki Ui, Hideaki Suzuki, Hiroko Hatano, Tohru Nagamitsu, Daisuke Takano, Hiroko Miyadera, Tetsuo Yamashita, Kiyoshi Kita, Hideto Miyoshi, Achim Harder, Hiroshi Tomoda, Satoshi Ōmura ..... (1): 50~55

A Novel Active Analogue of Gramicidin S with Smaller Ring Size
Makoto Tamaki, Rie Ishii, Sho Kikuchi, Eiji Watanabe ..... (4): 293~295

A pH-Stability Study of Phoslactomycin B and Analysis of the Acid and Base Degradation Products
Suparna Das Choudhuri, Sloan Ayers, William H. Soine, Kevin A. Reynolds ..... (9): 573~582

A New Class of Semisynthetic Anthracycline Glycoside Antibiotics Incorporating a Squaric Acid Moiety
Ferenc Sztaricskai, Anita Sum. Erzsébet Roth, István F. Pelyvás, Szabolcs Sándor, Gyula Batta, Pál Herczegh, Judit Reményi, Zsanett Miklán, Ferenc Hudecz ..... (11): 704~714

Obituary

Prof. Katsumi Kakinuma ..... (7): 483~484
Prof. Kenneth L. Rinehart ..... (8): 545~546